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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,057	06/28/2001	Curtis E. Jutzi	42390P11869	9317

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN
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EXAMINER

TRAN, ELLEN C

ART UNIT	PAPER NUMBER
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2134

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 09/895,057	Applicant(s) JUTZI ET AL.	
	Examiner Ellen C. Tran	Art Unit 2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

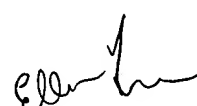
Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.



Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>Oct'06 & Dec'06</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This action is responsive to communication: amendment filed 12 January 2007, with acknowledgement of an original application filed 28 June 2001.
2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12 January 2007 has been entered.
3. Claims 1-30 are currently pending in this application. Claims 1, 7, 11, 17, and 21 are independent claims. Claims 1, 7, 11, 17, and 21 have been amended. Amendments to the claims are accepted. The IDS submitted 16 October 2006 and 6 December 2006 has been considered.

Response to Arguments

- 4 Applicant's arguments filed 12 January 2007 have been fully considered but they are moot due to new grounds of rejection.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. **Claims 1-30** are rejected under 35 U.S.C. 103(a) as being unpatentable Ishibashi US Patent No. 6,782,476 (hereinafter '476) in view of Saito et al. US Patent No. 7,093,295 (hereinafter '295).

As to independent claim 1, **“A method comprising: performing security authentication of a content driver by a content decryption component in order to verify an identity of the content driver as a secure content driver, wherein the content driver and the content decryption component are located within a kernel application space”** is taught in '476 col. 4, lines 15 through col. 5, line 2;

“receiving an encrypted content stream from the secure content driver” is shown in '476 col. 5 lines 29-36;

“performing integrity authentication of a run-time image of the secure content driver; and while integrity authentication of the secure content driver is verified, streaming decrypted content to the secure content driver to enable playback of the decrypted content to a user” is disclosed in '476 col. 6, lines 3-15;

the following is not taught in '476 **“wherein the kernel application space is modified for registering the secure content driver with the content decryption component in order for the secure content driver to receive security identity authentication”** however '295 teaches “The operating system 51 comprises an operating system service 52 and a system service API 53, which are user regions, and a kernel 54 and a HAL 55, which are non-user regions. The system service API 53 is arranged between the operating system service 52 and the kernel 54 and serves to mediate between the operating system service 52 and the kernel 54. The HAL 55 is arranged at the lowermost layer of the operating system 51 and serves to absorb differences in

the hardware for the software. The operating system service 52 comprises an application 59, a subsystem 60 and a security subsystem 61. The kernel 54 comprises a plurality of micro -kernels 62 and 64 and a kernel 63. The micro -kernel 62 has task management functions such as scheduling, interrupt, etc., and the micro -kernel 64 has an I/O management function” and “The changeable key K2 may be provided from the outside or may be generated in a set-top box” in col. 11, lines 11-30 and col. 12, lines 11-14;

“wherein the content decryption component is tamper-resistant” however ‘295 teaches “the real-time OS is implemented by the HAL, being a contact point with the hardware in the operating system. Accordingly, the re-encryption of the digital data is performed in a reliable manner, and it is impossible for decrypted data M, as it is, to be stored into the external device or to be transferred. Also, re-encryption is performed using the second changeable key K2 before the re-encryption using the unchangeable key K0. As a result, even if the unchangeable key K0 is known, it is very difficult to cryptanalyze the encrypted data by finding out the second changeable key K2, as the data is also encrypted by the second changeable key K2” in col. 11, lines 38-49.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of ’476 data processing apparatus with drivers that have authenticators to include a means to modify, the internal application software of the driver. One in the art would have been motivated to perform such a modification because there is a need for an improved digital rights management (see ‘295 col. 1, lines 44 et seq.) “When the digital data, which is stored in a medium and is given or lent to a user or which is transferred to the user, is used for secondary utilization such as storing, copying or transferring, it is impossible for the copyright

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owner to protect his or her copyright(s) in the digital data, which is in the hands of the users.

Therefore, a certain method is required to protect copyrights automatically and forcibly”.

As to dependent claim 2, “wherein performing security authentication further comprises: locating authorization information of the secure content driver; decrypting the authorization information received from the secure content driver; authenticating an identity of the secure content driver based on the decrypted authorization information; and authenticating an identity of the secure content driver based on the decrypted authorization information” is taught in ‘476 col. 4, lines 52-63.

As to dependent claim 3, “wherein authenticating the identity further comprises: calculating a hash value of a static image of the secure content driver prior to loading the secure content driver into memory; selecting a stored digital signature of the static image; decrypting the stored digital signature to retrieve a pre-calculated hash value of the secure content driver; comparing the pre-calculated hash value with the calculated hash value; and when the calculated hash value matches the pre-calculated hash value of the secure content driver, notifying the secure content driver of successful security authentication” is shown in ‘476 col. 5, lines 54-61.

As to dependent claim 4, “wherein performing security authentication further comprises: once security authentication of the content driver is established, determining a run-time at memory location of the secure content driver; and establishing a function entry point for receiving the stream of encrypted content from the secure content driver” is disclosed in ‘476 col. 7, lines 57 through col. 8, line 16.

As to dependent claim 5, “further comprising: receiving a content decryption key in order to enable decryption of encrypted content streams received from the secure content driver; receiving a digital signature of a static image of the secure content driver; and receiving a digital signature of a run-time image of the secure content driver” is taught in ‘476 col. 3, line 64 through col. 4, line 13.

As to dependent claim 6, “wherein performing integrity authentication further comprises: decrypting the encrypted content stream received from the secure content driver; while decrypting the received encrypted content stream, performing a hash value calculation of code segments that perform functionality of the secure content driver while loaded in memory; selecting a stored digital signature of a run-time image of the secure content driver; decrypting the digital signature to reveal a run-time hash value; comparing the computed hash value with the run-time hash value of the secure content driver; and while the calculated hash value matches the run-time hash value of the secure content driver, repeating the decryption, the performing, the selecting and the comparing until decryption of the received encrypted content stream is complete” is shown in ‘476 col. 6, lines 3-27.

As to independent claim 7, “A method comprising: establishing security authentication from a content decryption component, such that a content driver is verified as a secure content driver, wherein the content driver and the content decryption component are located within a kernel application space” is taught in ‘476 col. 4, lines 15 through col. 5, line 2;

“when establishment of security authentication is successful, receiving access to a callback function in order to receive clear, decrypted content streams from the content decryption component; receiving a stream of encrypted content; streaming the encrypted content to the content decryption component; and when security authentication is successfully established, receiving clear, decrypted content from the content decryption component via the received callback function” is disclosed in ‘476 col. 6, lines 3-15.

the following is not taught in ‘476 **“wherein the kernel application space is modified for registering the secure content driver with the content decryption component in order for the secure content driver to receive security identity authentication”** however ‘295 teaches “The operating system 51 comprises an operating system service 52 and a system service API 53, which are user regions, and a kernel 54 and a HAL 55, which are non-user regions. The system service API 53 is arranged between the operating system service 52 and the kernel 54 and serves to mediate between the operating system service 52 and the kernel 54. The HAL 55 is arranged at the lowermost layer of the operating system 51 and serves to absorb differences in the hardware for the software. The operating system service 52 comprises an application 59, a subsystem 60 and a security subsystem 61. The kernel 54 comprises a plurality of micro -kernels 62 and 64 and a kernel 63. The micro -kernel 62 has task management functions such as scheduling, interrupt, etc., and the micro -kernel 64 has an I/O management function” and “The changeable key K2 may be provided from the outside or may be generated in a set-top box” in col. 11, lines 11-30 and col. 12, lines 11-14;

“wherein the content decryption component is tamper-resistant” however ‘295 teaches “the real-time OS is implemented by the HAL, being a contact point with the hardware

in the operating system. Accordingly, the re-encryption of the digital data is performed in a reliable manner, and it is impossible for decrypted data M, as it is, to be stored into the external device or to be transferred. Also, re-encryption is performed using the second changeable key K2 before the re-encryption using the unchangeable key K0. As a result, even if the unchangeable key K0 is known, it is very difficult to cryptanalyze the encrypted data by finding out the second changeable key K2, as the data is also encrypted by the second changeable key K2” in col. 11, lines 38-49.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of '476 data processing apparatus with drivers that have authenticators to include a means to modify, the internal application software of the driver. One in the art would have been motivated to perform such a modification because there is a need for an improved digital rights management (see '295 col. 1, lines 44 et seq.) “When the digital data, which is stored in a medium and is given or lent to a user or which is transferred to the user, is used for secondary utilization such as storing, copying or transferring, it is impossible for the copyright owner to protect his or her copyright(s) in the digital data, which is in the hands of the users. Therefore, a certain method is required to protect copyrights automatically and forcibly”.

As to dependent claim 8, “wherein establishing security verification further comprises: receiving a request for authorization information from the content decryption component; transmitting the requested authorization information to the content decryption component; and when security authentication is successfully established, receiving notification of successful security authentication from the content decryption component,

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such that the content driver is established as the secure content driver” is shown in ‘476 col. 6, lines 45-67.

As to dependent claim 9, “wherein establishing security authentication further comprises: once security authentication is established, providing content decryption component with a memory location wherein the secure content driver is loaded at run-time; and providing the content decryption component with a function entry point for receiving the stream of encrypted content” is disclosed in ‘476 col. 6, lines 3-35.

As to dependent claim 10, “wherein receiving encrypted content further comprises: receiving encrypted content from a content source reader; and receiving a direction from a content driver to stream the encrypted content to the content decryption component” is taught in ‘476 col. 6, lines 3-15.

As to independent claim 11, this claim is directed to a computer readable medium of the method of claim 1; therefore it is rejected along similar rationale.

As dependent claims 12- 16, these claims contain substantially similar subject matter as claims 2-6; therefore they are rejected along similar rationale.

As to independent claim 17, this claim is directed to a computer readable medium of the method of claim 7; therefore it is rejected along similar rationale.

As dependent claims 18-20, these claims contain substantially similar subject matter as claims 8-10; therefore they are rejected along similar rationale.

As to independent claim 21, this claim is directed to the apparatus of the method of claim 1; therefore it is rejected along similar rationale.

As dependent claims 21-26, these claims contain substantially similar subject matter as claims 2-6; therefore they are rejected along similar rationale.

As dependent claims 27-30, these claims contain substantially similar subject matter as claims 7-10; therefore they are rejected along similar rationale.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen C Tran whose telephone number is (571) 272-3842. The examiner can normally be reached from 6:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ellen Tran
Patent Examiner
Technology Center 2134
11 February 2007